PEX-H285144 PCI Express Interface Module Digital I/O

Base Specifications

Model type	PEX-H285144
Bus requirements	PCI Express ™ Base Specification Rev. 1.0a x1
Number of slots	1 slot
Memory size	16 bytes
Data transfer method	I/O transfer (memory mapped I/O)
Dimensions	165.00 (D) x 106.65 (H) [mm]
Weight	120 g
Power consumption	+3.3 Vdc (+/-0.3 V):
All I/O and control signals inactive	0.4 A (typ.)
All I/O and control signals active	0.8 A (typ.)
Environmental conditions	Operating temperature: 0 deg C to 50 deg C Relative humidity: 20% to 90% (non-condensing)
Connectors	CN1: 96-pin half-pitch male connector
On-board connector	PCR-E96LMDC-ST+ (Honda Tsusin Kogyo Co., Ltd) or equivalent
Acceptable cable connector	PCR-E96DSFA+ (Honda Tsusin Kogyo Co., Ltd) or equivalent
Isolation	Common isolation
Interrupt sources	6 sources
MTBF	230852 hrs.
External I/O Signals	PULS.OUT1, PULS.OUT2 (Digital output) x 2 IR.IN1, IR.IN2 (Digital Input) x 2 RSTOUT (reset signal output) x 1 RSTIN (external reset input signal) x 1

Digital Input Specifications

Model type	PEX-H285144
Input signals	IN1 to IN32
Input configurations	Photo-isolated input (source type)
Input logic	1 ← On (low, closed) 0 ← Off (high, open)
Maximum voltage rating	+24 Vdc
Supply voltage range to power supply pin	+12 Vdc to +24 Vdc
Input voltage range	I0 Vdc to the supply voltage
Input impedance (protection function)	5.6 kΩ (Reverse bias protection diode and leakage current reduction shunt resistor: 1.5 kΩ)
Low-level Input current	I_{IL} = -2 mA (+12 Vdc) to -4.1 mA (+24 Vdc) (typ.)
Threshold current (shut-off guaranteed)	-0.5 mA (max.)
Threshold current	-0.55 mA to -1.5 mA (voltage level conversion: +3.9 Vdc to +9.6 Vdc)
Input response time	T_{RON}: 30 µs (typ.), T_{ROFF}: 80 µs (typ.)
Input control signals	STB1: Input-Data Latch Signal (in) x 1 ACK1: Input-Data Acknowledgement Signal (out) x 1

Digital Output Specifications

Model type	PEX-H285144
Output signals	OUT1 to OUT32
Output configurations	High-current drive open-collector output (sink type) (Darlington transistor)
Output logic	1 → Low (on, closed) 0 → High (off, open) (default value)
Apply voltage range to power supply pin	+12 Vdc to +24 Vdc
Current consumption per power supply pin	+1.7 mA (+12 Vdc) to +3.6 mA (+24 Vdc) per pin (typ.) +27.2 mA (+12 Vdc) to +57.6 mA (+24 Vdc) per COM pin (typ.)
Maximum voltage rating	+50 Vdc
Recommended voltage range	+12 Vdc to +24 Vdc
Maximum output current per channel	I_{OL} = 100 mA
Low-level output voltage	V_{OL} = +1.1 V (max.), +0.9 V (typ.) (I_{OL} = +100 mA) V_{OL} = +1.0 V (max.), +0.75 V (max.) (typ.) (I_{OL} = +50 mA (max.))
Leakage current	I_{OH} = +0.1 mA (max.)
Output response time	T_{RON}: 5 µs (typ.), T_{ROFF}: 65µs (typ.)
Output control signals	STB2: Output-Data Active Notification Signal (out) x 1 ACK2: Output-Data Acknowledgement Signal (in) x 1

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